



Clear Flo® *and* Clear Flo® Plus

Reverse Osmosis Systems

Installation & Owner's Manual



Operating Parameters:

Water supply:	Potable water
Feed water temperature:	40° F — 85° F
Safe operating pressure:	40-80 PSI
Recommended Turbidity:	<5 NTU
Recommended pH Range:	5-8
Recommended Max. Hardness:	7 GPG (120 PPM)
Total Dissolved Solids (TDS):	2000 PPM
Tank Air Pressure:	8-11 PSI (empty)

Warning:

- Open the spigot to flush water from first tank.
- Unit must be connected to a municipal or well water source that is tested on a regular basis to insure bacteriologically safe water.
- After installation check the unit for leaks.
- Do not allow unit to freeze. The membrane contains water and will be destroyed if frozen.
- Change filters regularly.
- Do not plumb unit to hot water. Membrane will be damaged.
- Heed source water operating parameters.
- Do not use with water of unknown quality.

Common System Stages *(stages and filters will vary by model and series)*

Stage 1 (SDC-25-1005)	Sediment filter 5 micron	Change: 6 months – 1 year
Stage 2 (UDF-10KDF.5)	KDF/Carbon filter	Change: 6 months – 1 year
Stage 3 (CB-25-1005)	Carbon block	Change: 6 months – 1 year
Stage 4 (TW-1812-100D)	100 gallon/day membrane	Change: 3 years – 5 years
Stage 5 (AICRO-B)	In-line carbon polishing filter	Change: 6 months – 1 year

Introduction

Our reverse osmosis drinking water systems have been designed for quick and simple installation and maintenance. By carefully reading this instruction manual and following the operational guidelines you will insure a successful installation and reliable operation. Routine maintenance is essential to the longevity and performance of the system. Filters should be changed regularly, depending on the quality of the feed water supply and quantity of water used.

Liability

The installer is responsible for any leaks resulting from installation of tubing or related fittings. The installer must check over the entire unit completely while under pressure to ensure unit is not leaking and functioning properly. Liability resulting from failure to check for leaks while under pressure is the sole responsibility of the installer. Maximum pressure rating is 80 PSI. If local water pressure exceeds 75 PSI, a pressure regulator must be installed, reducing the water pressure into the system.

Starting Your Installation

Component Checklist:

- 1 – Storage Tank
- 1 – RO System
- 1 – Faucet, supplied by dealer (with faucet install kit)
- 1 – Installation Kit

Avoid installation locations where the system might come in contact with hot water pipes or other hazards. Determine the location for the faucet. Check to see that drilling the faucet hole will not damage pipes or wires underneath the sink. Determine the location for the storage tank. A maximum distance of 15 feet from tank to faucet is possible. A shorter tubing run from tank to faucet will produce a faster flow out of the faucet.



Tubing and Fittings

To insure an optimal seal, tubing should be cut with the end square. An angled cut or distortion or kink of the tubing will not provide an efficient seal and may cause leaks.

Your system may come with quick-connect or standard compression fittings. With quick-connect style fittings, simply push the tube into the collet ring until you feel the tubing click into place. To remove, hold the collet ring flush against the fitting while pulling the tube out in the opposite direction. Standard compression fittings will usually have a nut, ferrule and insert. First slide the nut over the tubing end followed by the ferrule, then slide the insert inside the tubing end. Push the tubing into the fitting as far as possible then tighten down the nut on the threads.

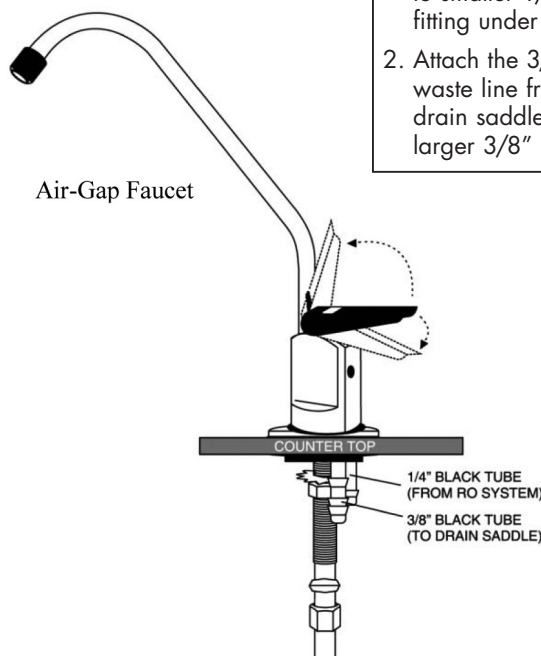
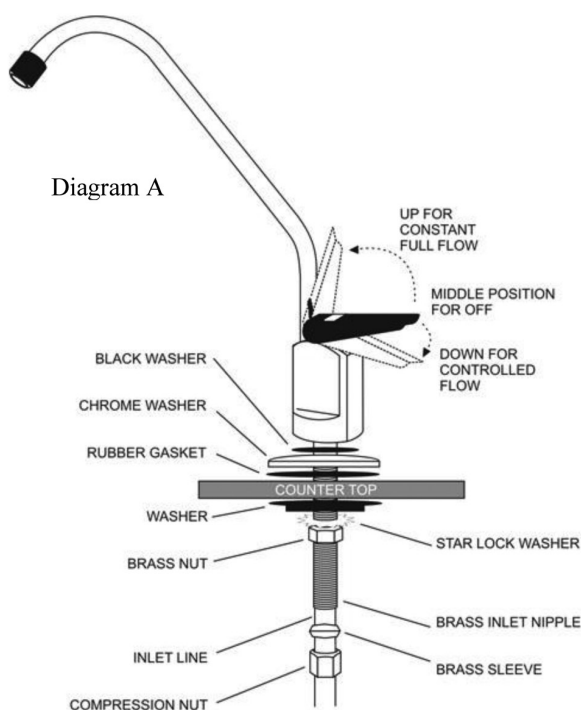
Note: It is recommended that the system's expendable filters and membrane be thoroughly rinsed at the shop prior to installation, and if practical the holding tank should be filled with treated water. If this rinsing procedure is performed at the installation site, the consumer should take note that it is recommended that the first tank of water not be consumed. Additionally, carbon filters may leach carbon dust fines on startup. This may discolor the water initially, but should clear up quickly.

1. FAUCET INSTALLATION – *supplied by dealer*

Drilling the Faucet Hole

The product water faucet may be installed on any flat surface at least 2" in diameter. Check the underside of the location for interference. Drill a hole, at least 7/16" (11mm) in diameter, through the countertop where the faucet will be mounted (most faucets will mount to a hole diameter of up to 1-1/4"). Drilling a 1/4" (6mm) pilot hole first may be helpful. Take caution when drilling the faucet-mounting hole. Different countertops may require special drill bits and/or installation methods.

Note: Faucet may differ from illustration.



Air Gap Faucets

1. Attach 1/4" black waste line from R.O. to smaller 1/4" barb fitting under faucet.
2. Attach the 3/8" waste line from drain saddle to the larger 3/8" barb.

Note: Some states require the use of an air gap faucet. Check your local plumbing code to assure compliance.

Mounting the Faucet

Insert the faucet shank down through the drilled hole. Be sure the faucet body, faucet base, and the rubber faucet base washer are in place above the sink as shown in Diagram A. Install the star lock-washer and nut, and then tighten firmly while faucet is aligned in the desired location. Do not over tighten. **Tip: This step may be easier with two people. One person holds the faucet in place from above, while the other tightens the faucet from underneath.**

Note: To connect an additional point of use outlet (icemaker, extra faucet, etc.) place a tee-fitting connector along the line between the faucet and the RO system. A line can then be run from the tee to the outlet device. Additional fittings and/or connectors may be required. Ice makers may have proprietary connections and/or specific pressure requirements. Check with your manufacturer for details.

2. FEED WATER ASSEMBLY

Turn off cold water supply to the sink using the supply valve located under the sink. Different systems will come with different adapters types and styles. Shown below are a few of the most common options. Only install to cold water supplies and do not over tighten fittings.

Note: Some shut off valves have an extra port or a separate valve plumbed for an icemaker or filter system. In either of these cases you will not need the feedwater adapter, just hook the feed line directly to this access point.

Scenario 1: Plastic Feed Water

Make sure the black washer is seated in the feedwater adapter. Tighten feedwater adapter to the valve with an adjustable wrench. Tighten until snug but do not over tighten. Connect the tubing feed line (usually red in color) by plugging the tubing end into the feed water connector collet, cut the tubing line anywhere along it, and install the inline ball valve, again by pushing the tubing ends securely into the collets.

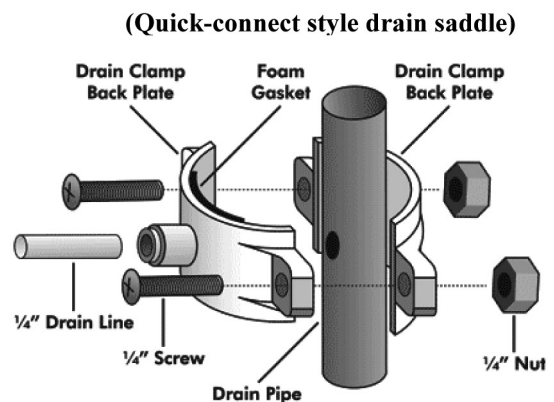
Installation of Feed Water Supply

1. Shut off water supply at brass/chrome supply valve.
2. Disconnect riser from brass/chrom supply valve.
3. Ensure that the sealing gasket is fully seated into the Angle Stop Valve female thread.
4. Install Angle Stop Valve on supply valve.
5. Connect the riser to the Angle Stop Adapter Valve.
6. Fully insert tubing into the Sppedfit side of the valve.
7. Open valves and check for leaks.



3. DRAIN INSTALLATION

Peel the protective film off of the foam gasket and apply to inside of drain saddle, using care to align foam gasket hole with drain port. Position the drain saddle on the vertical or horizontal drainpipe from your sink. Position as far away from the garbage disposal as possible and after the P-trap. Drill 1/4" (6mm) hole into the drainpipe where the drain saddle will be mounted. Do not drill all the way through—stop after piercing the first wall of the pipe. Mount the drain saddle and align the hole using a small drill bit or other small straight object. Gently tighten the two screws evenly on both sides of the clamp until the clamp is snug on the pipe. Do not over tighten.



4. STORAGE TANK INSTALLATION

The storage tank may be placed in either the vertical or horizontal position without affecting system performance. Put four to five wraps of Teflon tape around the metal stem at the top of the tank. Hand tighten the plastic shut off ball valve found in the installation packet down on to the tank stem. Do not over tighten.

Note: Tank air pressure can be measured at the air stem on the opposite side of tank. It may be covered with a blue cap. Tank air pressure should be between 8-11 PSI when empty.

5. TUBING CONNECTIONS *(systems may not have color-coded tubing or different color codes)*

Feed (Red) – connects main water supply feed to elbow fitting on right side of unit

Drain (Black) – connects drain saddle to bottom fitting on membrane housing
(inline flow restrictor necessary on this line)

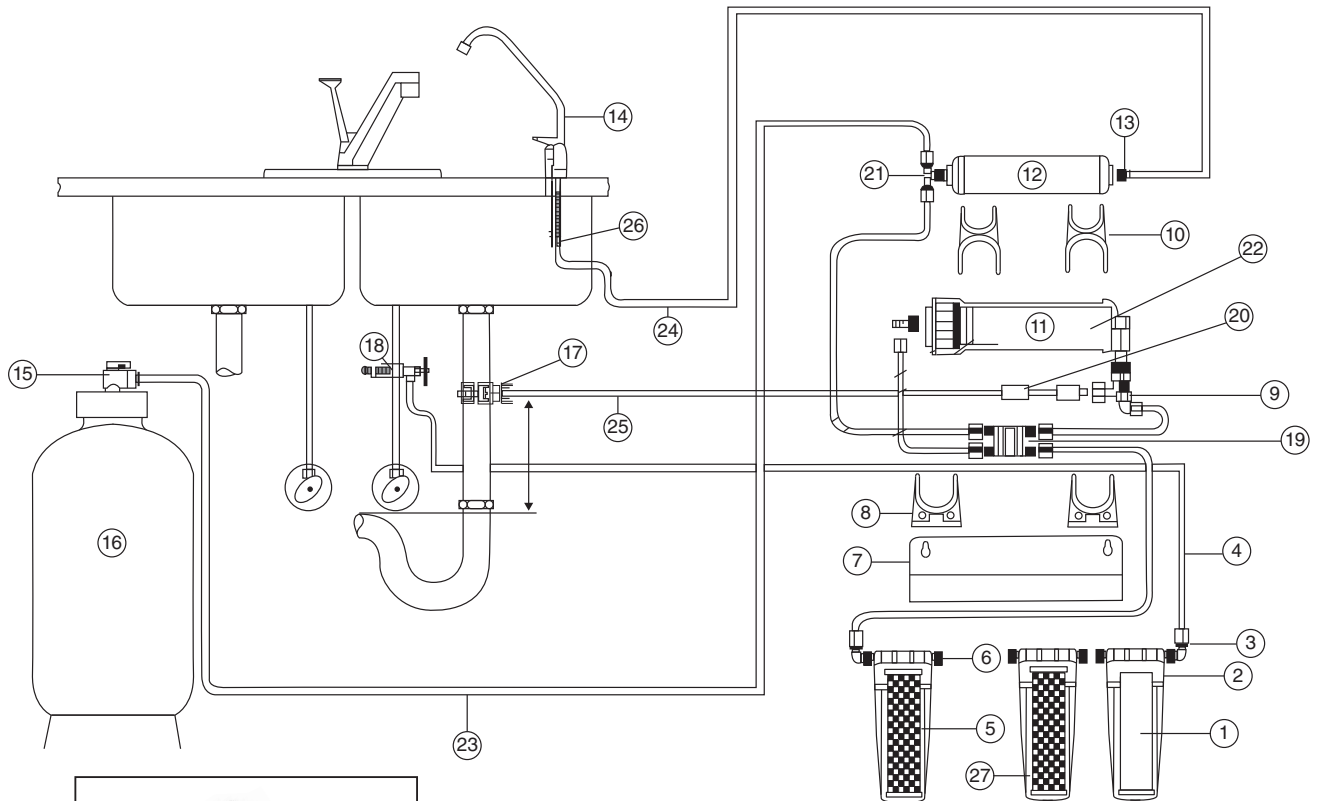
Tank (White) – connects tank ball valve to tee fitting on inline filter

Faucet (Blue) – connects faucet to elbow fitting on left side of inline filter

6. UNIT STARTUP

The RO unit may be mounted on the wall though not necessary. To mount, use the bracket holes on the RO unit as a guide, and with the screws provided in the install pack, mount the system in the desired location. With all tubing connections complete, turn on the cold water supply to the RO unit and open all ball valves. Ball valves are open when the handle runs parallel to the tubing. Immediately check the entire system for leaks. If you notice any leaks turn off water supply and tighten where necessary. With the RO system on, lift the drinking faucet handle until water begins to drip out. Next, close the faucet to allow the tank to fill. This may take 3-4 hours depending on size of system. Once the tank is full it is recommended to flush completely. Open and leave open the drinking water faucet until the water coming out again slows to a dribble. This signifies the tank is empty. The drinking faucet can then be closed to allow the tank to fill again. At this point the water is ready for consumption.

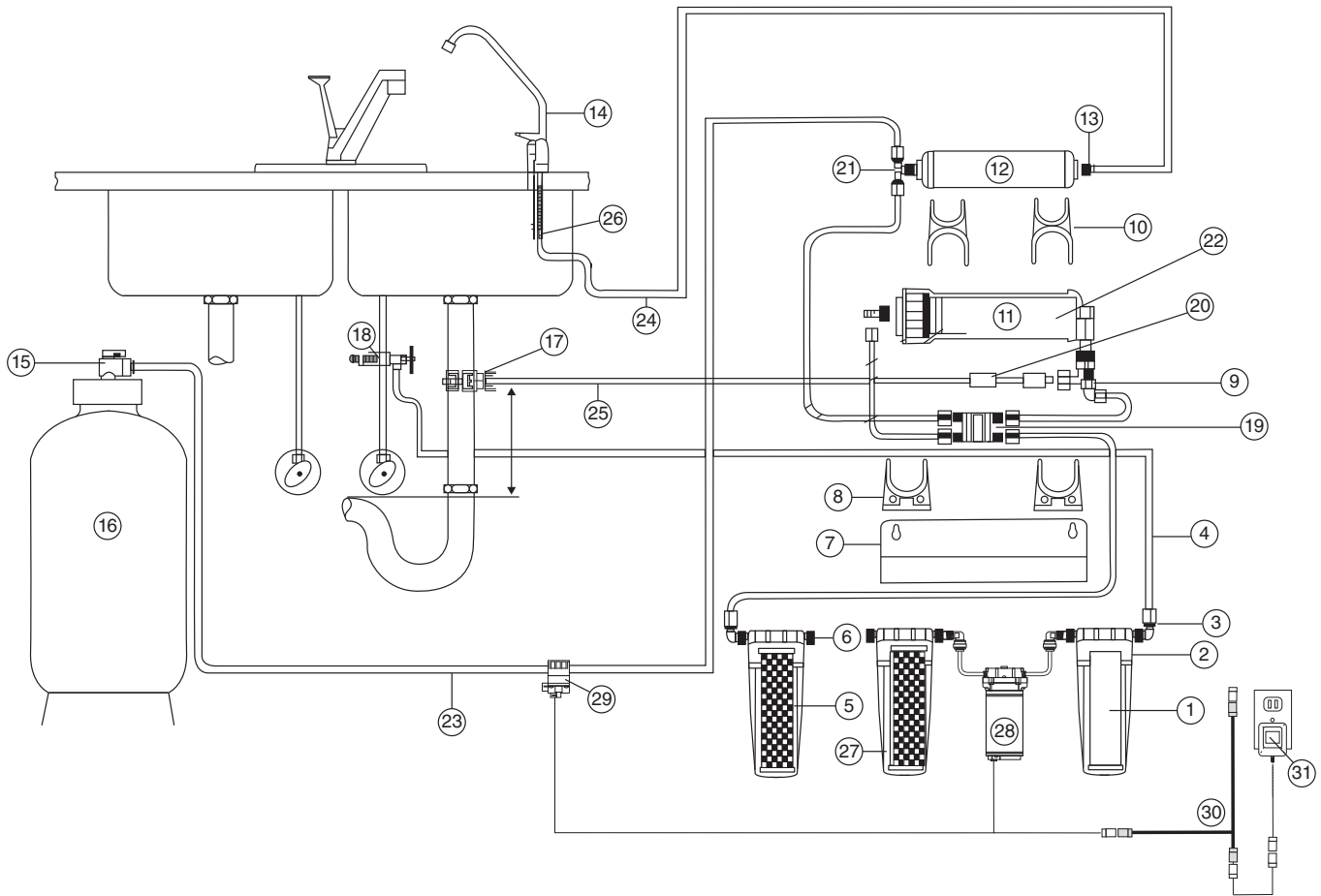
Clear Flo® CFRO



Part Number		Description	Qty.	Part Number		Description	Qty.
1	SDC-25-1005	10" 5 micron sediment filter	1	15	PR-CV1364	Quick connect 3/8" tank ball valve	1
2	FH4200W	White filter housing, 1/4" ports	3	16	Aqua-4	4 gallon R.O. tank	1
3	PR-ME0404	Quick connect 1/4" elbow	2	17	SC500B-14	Drain clamp	1
4	PE-08-BI-0500F-R	1/4" red tubing	7 ft	18	SV-6	Self-piercing feed valve	1
5	CB-25-1005	10" carbon block	2	19	PR-CV0201W	Automatic shut off valve	1
6	PR-HN0404	1/4" hex nipple	2	20	FR-***	Flow restrictor	1
7	FM-60	Triple bracket	1	21	PR-MRT0604	Quick connect 1/4" x 3/8" x 3/8" male run T	1
8	C-2500W	Single clip membrane housing	2	22	TW-1812-100D	100 GPD TFC membrane	1
9	PR-CV3142	Quick connect 1/4" tube x 1/8" thread with check valve	1	23	PE-12-BI-0500F-Y	3/8" yellow tubing	5 ft
10	DC-2500W	Double clip membrane housing to inline	2	24	PE-12-BI-0500F-B	3/8" blue tubing	6 ft
11	MH18	Membrane housing, 1/8" ports	1	25	PE-08-BI-0500F-E	1/4" black tubing	6 ft
12	AICRO-B	10" in-line carbon post filter	1	26	PR-FA06-716	Quick connect 3/8" faucet adapter	1
13	PR-MC0604	Quick connect 3/8" tube x 1/4" thread male connector	1	27	UDF-10KDF.5	10" KDF/carbon filter	1
14	WDF103B	Long reach chrome faucet	1				

Clear Flo® Plus

CFRO-PLUS



Part Number		Description	Qty.	Part Number		Description	Qty.
1	SDC-25-1005	10" 5 micron sediment filter	1	17	SC500B-14	Drain clamp	1
2	FH4200W	White filter housing, 1/4" ports	3	18	SV-6	Self-piercing feed valve	1
3	PR-ME0404	Quick connect 1/4" elbow	2	19	PR-CV0201W	Automatic shut off valve	1
4	PE-08-BI-0500F-R	1/4" red tubing	7 ft	20	FR-***	Flow restrictor	1
5	CB-25-1005	10" carbon block	2	21	PR-MRT0604-B	Quick connect 1/4" x 1/4" x 3/8" male run T	1
6	PR-HN0404	1/4" hex nipple	2	22	TW-1812-100D	100 GPD TFC membrane	1
7	FM-60	Triple bracket	1	23	PE-12-BI-0500F-Y	3/8" yellow tubing	5 ft
8	C-2500W	Single clip membrane housing	2	24	PE-12-BI-0500F-B	3/8" blue tubing	6 ft
9	PR-CV3142	Quick connect 1/4" tube x 1/8" thread with check valve	1	25	PE-08-BI-0500F-E	1/4" black tubing	6 ft
10	DC-2500W	Double clip membrane housing to inline	2	26	PR-FA06-716	Quick connect 3/8" faucet adapter	1
11	MH18	Membrane housing, 1/8" ports	1	27	UDF-10KDF.5	10" KDF/carbon filter	1
12	AICRO-B	10" in-line carbon post filter	1	28-31	PM-EC-203-100A	Low-flow booster pump kit	1
13	PR-MC0604	Quick connect 3/8" tube x 1/4" thread male connector	1	29	(part of booster kit)	3/8" tank pressure shut-off switch	1
14	WDF103B	Long reach chrome faucet	1	30	(part of booster kit)	Y-splitter cable	1
15	PR-CV1364	Quick connect 3/8" tank ball valve	1	31	(part of booster kit)	Low-flow transformer	1
16	Aqua-4	4 gallon R.O. tank	1				

TROUBLESHOOTING GUIDE

Not Enough Water From Holding Tank

Possible Cause	Solution
Feed water valve is plugged or closed.	Open valve or unclog.
Sediment/Carbon filter(s) clogged.	Replace filters.
Low incoming water pressure.	Incoming water pressure must be above 40 PSI. Install booster or permeate pump.
Reverse osmosis membrane is fouled.	Make sure incoming water pressure is within operating limits. Make sure drain line is not clogged. (See High TDS) Correct cause of fouling and replace R.O. membrane.
Air pressure in holding tank is incorrect.	Empty water from holding tank. Air pressure in valve stem should be between 6-8 PSI.
Air bladder in holding tank is ruptured.	Replace holding tank.
Holding tank valve is closed.	Open valve.
No water to drain. Drain flow restrictor is clogged.	Replace drain flow restrictor.
No water to drain. Air cap faucet is clogged.	Clear or replace air gap faucet.
Check valve on R.O. membrane housing is stuck.	Replace check valve.
Automatic shut-off valve malfunctioning.	Replace automatic shut-off valve.

Low Water Pressure From Dispensing Faucet

Possible Cause	Solution
Air pressure in holding tank is incorrect. <i>(This is the #1 reason for low flow from reverse osmosis faucet.)</i>	Open faucet and empty water from holding tank. Shut off feed water to system and remove holding tank from under sink. Locate the air valve stem (just like on a car or bicycle tire) and add air. If there is still water in the tank, continue to add air until all the water is removed. Once all the water is removed, continue to add air and pressurize to 6-8 PSI. Re-install the tank under the sink, turn on feed supply to the system and allow the tank to fill.
Carbon post filter is clogged.	Replace post filter.
Holding tank valve is partially closed.	Open valve.
Faucet is out of adjustment or faulty.	Repair or replace faucet.
Heavy water use. Holding tank empty.	Allow holding tank to refill.
Low water production.	See previous section on "Not Enough Water From Holding Tank."

Product Water is High in Total Dissolved Solids (TDS)

Possible Cause	Solution
Clogged prefilter.	Replace filter.
Low incoming water pressure.	Incoming water pressure must be > 40 PSI. Install booster or permeate pump.
R.O. membrane is not correctly sealed in Housing.	Check that R.O. membrane is correctly installed.
Reverse osmosis membrane is expended.	If membrane life is unusually short, find and correct the problem. (Average life is 2-3 years.) Replace R.O. membrane.
Product water and drain water lines are reversed.	Correct plumbing.
No water to drain. Drain Flow Restrictor is clogged.	Replace Drain Flow Restrictor.
No water to drain. Air Gap Faucet is clogged.	Clear or replace Air Gap Faucet.
The Automatic Shut-Off Valve is not closing.	Repair or replace Automatic Shut-Off Valve.
New Carbon Postfilter has not been rinsed completely.	Drain Holding Tank twice to rinse new Carbon Postfilter.
The incoming feed water TDS has increased.	An increase in feed water TDS will also give an increase in Product Water TDS.

Tastes and Odors in Product Water

Possible Cause	Solution
Carbon post filter is exhausted.	Replace filter.
There is foreign matter in holding tank.	Clean, flush and sanitize the holding tank. Replace filters.
Product water and drain water lines are reversed.	Correct plumbing.
Dissolved gases in feed water.	Pre-treat feed water to remove gasses.
Increase in product water TDS.	See high TDS in product water section.

Drain Water Overflows at the Air Gap Faucet

Possible Cause	Solution
Air gap is clogged.	Clear air gap.
Drain line is clogged.	Clear tubing.
Drain flow rate is too high.	Replace flow restrictor.

Faucet Leaks or Drips

Possible Cause	Solution
Water leaks from faucet spout.	Adjust faucet by turning the tee bar located under the handle to provide a small amount of free play in the handle when shut off. Should this not work, repair or replace the faucet.
Leaks from beneath the handle.	Repair or replace the faucet.

Important Information

Serial Number	Installation Date	Model Number

Service Record (Last Service Date)

Usage Guidelines

- Do not use with water that is microbiologically unsafe or of unknown quality without adequate disinfection before or after the equipment.
- Water supplies that exceed limits for hardness, iron, manganese and hydrogen sulfide require pretreatment.
- Do not allow exposure to temperatures below 33°F (1°C).
- Maximum operating temperature: 85°F (38°C).
- Operating pressure: 40-80 pounds per square inch (PSI).
- This system must be installed according to local plumbing codes.
- For optimal performance, this system requires the regular replacement of all filters to operate properly. This system's carbon and particulate filters should be changed at least annually and the reverse osmosis membrane should be replaced every 3-5 years*. Fluctuation in chlorine, sediment and TDS levels may affect the frequency of replacement.

**Chlorine may damage the reverse osmosis membrane used in this system. Your drinking water system includes granular activated carbon which protects the reverse osmosis membrane by reducing or eliminating the presence of chlorine. Influent chlorine should not exceed 3 mg/L. It is recommended that a water softener is used for water over 7 grains per gallon (GPD).*



Reverse Osmosis Drinking Water System Five/One Year Limited Warranty

Congratulations. You have purchased one of the finest water treatment systems available. In the unlikely event of a problem due to defects in material and workmanship, we proudly warrant our reverse osmosis drinking water system to the original owner, at original installation location, when installed within recommended parameters from the date of original installation as follows:

For a period of FIVE YEARS:

The entire reverse osmosis drinking water system with the exception of the reverse osmosis membrane and disposable sediment and carbon filters.

For a period of ONE YEAR:

The reverse osmosis membrane.

Any part found defective within the terms of this warranty will be repaired or replaced by the dealer at the manufacturer's discretion. You pay only freight from our factory and local dealer charges. To obtain local warranty service, contact original dealer. If original dealer is unknown, contact Water-Right for authorized service dealer in your area. If no authorized dealer is located in your area, please ship defective part or component freight prepaid to:

Water-Right, Inc.
1900 Prospect Ct.
Appleton, Wisconsin 54914

Water-Right, at its discretion, will repair or replace the part or component at its expense and return part freight collect.

The above provisions of the warranty are valid as long as the system is connected in compliance with local plumbing codes and in an equivalent manner and condition of the original installation and is owned by the original owner.

This warranty does not cover damages due to accident, fire, flood, freezing, or any other Act of God. Water-Right is not responsible for damages due to change in water conditions, misapplication, misuse, neglect, vacuum, oxidizing agents, alteration, or lack of maintenance. No responsibility is assumed for loss of use of the system, inconvenience, loss or damage to real or personal property or any incidental or consequential damages. Furthermore, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source. **To the extent permitted by law, Water-Right disclaims all implied warranties, including without limitation warranties of merchantability and fitness for particular purpose; to the extent required by law, any such implied warranties are limited in duration to the period specified above for the specified components.**

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.



Manufactured at:
1900 Prospect Court • Appleton, WI 54914
Phone: 920-739-9401 • Fax: 920-739-9406